



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Confirmation No. 2053
Tatsuya EKINAKA et al. : Docket No. 2003-1440
Serial No. 09/890,326 : Group Art Unit 1712
Filed July 20, 2001 : Examiner Kuo Liang Peng

SURFACE-PROTECTED TRANSPARENT
PLASTIC COMPOSITE

SUPPLEMENTAL RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEES FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975

Sir:

Further to the response to Final Rejection filed on April 7, 2004, it is pointed out in the paragraph bridging pages 12 and 13 of said response that a Declaration comparing the present invention to that of Nakayama et al. would be provided in the near future. Such Declaration is submitted herewith.

The Declaration demonstrates the following.

In the surface-protected plastic composite material of the present invention, the thermally cured coating layer (II) is formed of an organosiloxane resin having a specific composition, so that the surface-protected plastic composite material is surprisingly excellent in abrasion resistance, peel resistance and weatherability.

According to present claim 1, the coating layer (II) in the present invention is formed of an organosiloxane resin formed from the following components (a), (b) and (c).

- (A) colloidal silica (component a)
- (B) a hydrolysis condensate of a trialkoxysilane (component b), and
- (C) a hydrolysis condensate of a tetraalkoxysilane (component c).

The feature of the coating layer (II) in the present invention is that the organosiloxane resin thereof is formed from a combination of the components (a), (b) and (c), and in addition, particularly importantly, the coating layer (II) satisfies the following requirements (i) and (ii).

- (i) component (b) is constituted of at least 70%, based on the weight of the entire trialkoxysilane, of methyltrialkoxysilane, and
- (ii) the organosiloxane resin contains 5 to 45% by weight of component (a), 50 to 80% by weight of component (b) and 2 to 30% by weight of component (c).

Of the above requirements (i) and (ii), requirement (i) produces a great effect on the properties (particularly, abrasion resistance) of the coating layer (II) or the composite material.

The enclosed Declaration shows a comparison between a case where 100% by weight, based on the entire trialkoxysilane, of methyltrimethoxysilane is used as component (b) (Experiment A) and a case where 50% by weight of methyltrimethoxysilane and 50% by weight of ethyltrimethoxysilane are used as component (b) (Experiment B).

The enclosed Declaration shows that Experiment B results in a very poor value in terms of abrasion resistance property, and that the results from Experiment A are excellent in terms of abrasion resistance property.

The enclosed Declaration fully supports the fact that when the most part (at least 70% by weight) of component (b) is constituted of methyltrialkoxysilane, the composite material is excellent in abrasion resistance, peel resistance and weatherability.

The cited Nakayama et al. reference neither describes nor suggests anything concerning the composition of the coating layer (II) in the present invention, particularly, concerning the composition of component (b).

Further, the effect produced by the coating layer (II) in the present invention is not at all obvious from Nakayama et al.

For the foregoing reasons, it is apparent that the rejection on Nakayama et al. is untenable and should be withdrawn.

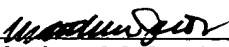
No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Kiyoshi KAMEI et al.

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEES FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975

By: 
Matthew M. Jacob
Registration No. 25,154
Attorney for Applicants

MJ/ke
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
August 11, 2004